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ABSTRACT

A step-by-step method for designing and improving evaluation methods is presented for educators who are in the position of evaluating an educational gathering of adults. This method is to insure that evaluation instruments are: (1) accurate enough to provide valid data; (2) short enough to be filled out by a large group of evaluators in a hurry to go home; and (3) relevant enough to elicit concrete comments. It shows how to tabulate the evaluation accurately, rapidly, and systematically. Part I of the document is an evaluation summary and a complete evaluation report. Part II shows how to develop summaries and complete evaluation reports. Part III explains how to apply this evaluation approach to different situations. (BJG)

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TITLE

# A SIMPLIFIED EXAMPLE OF HOW TO EXTRACT MORE PLANNING DATA FROM EXISTING EVALUATION INSTRUMENTS

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DATE

March 1, 1975

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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# A SIMPLIFIED EXAMPLE OF HOW TO EXTRACT MORE PLANNING DATA FROM EXISTING EVALUATION INSTRUMENTS

Wouldn't it be nice to have an empirically sound yet procedurally simple way to extract more planning data from existing evaluation instruments?

Wouldn't it be nice to have a simple statistically sound way to identify the subgroups into which evaluating participants divide themselves?

Wouldn't it be nice to have the simple uncomplicated devise that scientifically pinpoints both AGREEMENT and DISAGREEMENT among major evaluator subgroups, the director of the program being evaluated and the program staff?

You guessed it, such material is available.

From a practical point of view, the publication being talked about presents a sample evaluation step-by-step from data to findings, from findings to conclusions, and from conclusions to planning.

Since every step of the way is both illustrated with examples and explained by careful analysis, this publication could be called a complete HOW-TO-REPLICATE-IT kit.

This publication starts with the obvious fact that the questionnaire used last year, looked at and revised slightly by you this year, and duplicated for all evaluators probably doesn't have the following characteristics:

Accurate enough to provide valid data.
Short enough to be filled out by a large group of evaluators in a hurry to go home.
Relevant enough to elicit concrete comments.

If you don't have an evaluation instrument with the above three characteristics, this document shows you how to develop one without having to reinvent the wheel or invest several days in the process.

If the evaluation you used last year and revised this year has the above three characteristics, this publication shows you how to tabulate the evaluation accurately, rapidly, and systematically.

Any reader who can do all of the above should stop reading this short article and write to the author immediately. Send the author a copy of what you have written. The author will be happy to incorporate your discoveries and insights into the next version of this article.

No claim is made that this publication shows the one and only "best" method to evaluate. However, it is a different method. Just as teachers tend to teach as they were taught, so evaluators tend to imitate an evaluation that seems to have done a good job elsewhere in similar circumstances.

This publication proposes one example of one evaluation type that seems to have worked in a specific set of circumstances.

## THE AUDIENCE FOR THIS DOCUMENT

This document is addressed to any educator who finds himself in the position of evaluating an educational gathering of adults.

Typically, the evaluator in this case develops an evaluation form, explains and distributes the evaluation form, and adds up the total number of responses.

In the case where room has been left for participant reactions, the evaluator often types up the participant responses question by question.

Such reports are usually accurate, even though much reading time is consumed.

> Wouldn't it be nice to have a simple way to identify the subgroups into which participants divide themselves?
>
> Wouldn't it be nice to have a simple uncomplicated statistical device that scientifically pinpoints both AGREEMENT and DISAGREEMENT among these subgroups of participants?
>
> Wouldn't it be nice to have an example of how this has been done so that local implication would not be left to chance?
>
> Wouldn't it be nice to look at an evaluation instrument that provides not only a total of responses and a transcript of comments BUT ALSO
>
> > Statistical findings,
> > Conclusions based upon empirical evidence, and
> > Planning based upon the reinforcement of previous success and the avoidance of past errors.

This document has something for any reader who answers yes to the above questions. It presents a sample evaluation step-by-step from data to findings, from findings to conclusions, and from conclusions to planning.

After the reader has had a chance to look at an actual evaluation case study, the reader has the option of stopping or of going on to the next section which composes a complete HOW-TO-REPLICATE-IT kit.

Do you find it difficult to develop a questionnaire with the following characteristics?

- Accurate enough to provide valid data
- Short enough to be filled out by a large group of evaluators in a hurry to go home
- Relevant enough to elicit concrete comments

After you have invested a lot of time in developing an adequate evaluation instrument with the above characteristics, are you able to tabulate it accurately, rapidly, and systematically?

Anyone involved with evaluating an institution, workshop, conference, training session, or meeting is concerned with the above questions. Similarly, most evaluators are concerned with developing an appropriate evaluation instrument and with pinpointing the findings and conclusions available therefrom.

The typical solution to this double challenge is to find out what was done last year and to repeat it with a few minor surface modifications. If last year's evaluation was adequate, then there is reason to hope that this year's replication will be at least adequate or better than last year.

On the other hand, if a poor job was done last year, there is little reason to hope that a few surface modifications can improve this basic lack of quality evaluation.

Just as teachers tend to teach as they were taught, so evaluators tend to imitate an evaluation that seems to have done a good job elsewhere in similar circumstances.

This document is presented in two parts. Part I shows the evaluation instrument, the statistical treatment, the findings, the conclusions, and the plans developed as a result of evaluating one institute. Part II analyzes this example in a how-to-do-it kit that can be imitated in a variety of circumstances.

Any reader who cannot yet decide whether or not this document will be profitable for local applications is urged to do the following:

> First, read Part I to find out if this evaluation is similar and appropriate to local evaluation needs.
>
> Second, if this approach to evaluation is considered relevant, read Part II on how-to-do-it.

# PART I

## AN EVALUATION SUMMARY

## AND

## A COMPLETE EVALUATION REPORT

An evaluation summary should be short and to the point. An evaluation summary is meant to be read rapidly and as such should concentrate only on the highlights. An evaluation summary should include specific sources of additional details for those interested.

A complete evaluation report is intended to give the complete picture of an evaluation. A complete evaluation report is for thoughtful reading and point by point discussion. A complete evaluation report should indicate the exact statistical data sources upon which findings, conclusions, and planning recommendations are based.

As herein defined, AN EVALUATION SUMMARY includes:

Conclusions
Recommendations
Cross-References for more detail

As herein defined, A COMPLETE EVALUATION REPORT includes:

The evaluation item text
Evaluator response alternatives
Findings
Data source
Conclusions
Planning recommendations

For an example of a concise one-page evaluation summary, look carefully at page .

For an example of a typical complete evaluation report, start reading on page and continue until the end of part I.

After this introduction to the same data presented in two different formats, that is, EVALUATION SUMMARY FORMAT and COMPLETE EVALUATION REPORT FORMAT, the reader is in a position to contrast specific characteristics and functions for each format type.

For those interested in a step-by-step explanation of how to develop either an evaluation summary or a complete evaluation report, part II is provided. Part II begins on page 31.

## EVALUATION CONCLUSIONS AND RECOMMENDATION AT A GLANCE

| CONCLUSIONS | RECOMMENDATIONS | For More Detail See: |
|---|---|---|
| 1. Rapport was achieved. | 1. A working relationship still has to be spelled out in detail. | Pages |
| 2. Modules and Mastery Tests were produced. | 2. Standards are needed for:<br>a) Quality control<br>and<br>b) Use with learners. | Pages |
| 3. Some USABLE materials were produced. | 3. These usable materials need to be catalogued and made available for general use. | Pages |
| 4. Some public school educators became acquainted with some correctional institution problems. | 4. An exhaustive and authenticated list of correctional problems needs to be drawn up and discussed. | Pages |
| 5. Some correctional institution educators became acquainted with some requirements of occupational subject matter. | 5. A concise list of measurable requirements of occupational subject matter needs to be drawn up and discussed. | Pages |
| 6. Most participants realized interagency cooperation poses protocol and procedural problems. | 6. Interagency protocol problems need to be spelled out in terms of "procedures to follow." | Pages |
| 7. Module expertise ranged from none to extensive. | 7. Sample existing modules should have been distributed at the very beginning of the institute and then adapted for local use. | Pages |
| 8. The modular approach was found helpful "in general." | 8. A more systematic approach is needed to set standards; for example, levels of excellence in using modules:<br><br>Level I: Modules are written.<br>Level II: Modules are debugged in small groups.<br>Level III: Modules are field tested with large groups.<br>Level IV: Modules are used to produce documented measurable learner success. | Pages |
| 9. The evaluator received three different agendas for the same institute. | 9. An agenda:<br>a) Must be established in advance.<br>b) Must be acceptable to all concerned.<br>c) Must be adhered to and followed. | |

## EVALUATOR IDENTIFICATION

EVALUATION ITEM TEXT: CHECK ONE: I work for a ☐ public school ☐ correctional institution

EVALUATOR RESPONSE ALTERNATIVES:

ALTERNATIVE A: Check neither box.

ALTERNATIVE B: Check the public school box

ALTERNATIVE C: Check the correctional institution box

FINDINGS:

16 evaluators checked neither box.
These evaluators constitute the NO IDENTIFICATION group.

11 evaluators checked the PUBLIC SCHOOL box.
These evaluators constitute the PUBLIC SCHOOL group.

25 evaluators checked the CORRECTIONAL INSTITUTION box.
These evaluators constitute the CORRECTIONAL INSTITUTION group.

DATA SOURCE: Page 45, table 1, question 0.

Obviously, the simple directions, "CHECK ONE," were not enough to get the NO IDENTIFICATION groups to check the appropriate box.

Internal evidence indicates that at least 4 of the NO IDENTIFICATION group worked for a correctional institution.

External evidence also raises the possibility that members of the NO IDENTIFICATION group might work for State Education Departments, State agencies, or other institutions.

PLANNING RECOMMENDATIONS:

The following sentence should be added to the general directions: "Identify yourself as working for a public school, correctional institution, or other."



The evaluator identification question should be expanded to include, "Other; please specify."

## EVALUATION ITEM 1

EVALUATION ITEM TEXT:

Do you feel that this meeting between public school teachers and correctional teachers has produced a working relationship?

EVALUATOR RESPONSE ALTERNATIVES:

ALTERNATIVE A: Check the box for yes.

ALTERNATIVE B: Check the box for no.

ALTERNATIVE C: Add comments in the section entitled HOW.

FINDINGS:

100% of all three groups (no identification, public school, correctional institution) responded to evaluation item with YES.

52 evaluators provided a total of 45 comments in the section labeled HOW.

DATA SOURCE: Page 45, table 1,TOTAL COUNTS, question 1.

Page 54, COMMENTS ON ITEM 1.

CONCLUSIONS:

It is rare to find such unanimity in a group that brings together two different types of educators from two different types of institutions.

It can be assumed that in the opinion of evaluators, a working relationship has been developed.

Operationally, this working relationship can be defined as an "exchange of ideas and interaction," according to more than 30 spontaneous evaluator comments.

PLANNING RECOMMENDATIONS:

Operationally, a working relationship has been defined as "exchanging ideas and interaction."

If the planners of the next institute have other important components to be included in a working relationship, the agenda, format, and evaluation instrument should reflect this concern for additional components, for example, such as

Exchange of addresses
Setting up of meetings
Selection of joint curriculum areas
A catalog of available testing materials
Identification of priority problems
Development of a timetable for action
A chance to make definite time and personnel commitments

## EVALUATION ITEM 2

EVALUATION ITEM TEXT:

Was a module or mastery test completed as a result of this institute?

☐ Yes ⟶ Which?
- ☐ Module
- ☐ Mastery test

☐ No ⟶ Why not?

EVALUATOR RESPONSE ALTERNATIVES:

ALTERNATIVE A: Check the box for yes.

ALTERNATIVE B: Identify whether a module was developed.

ALTERNATIVE C: Identify whether a mastery test was developed.

ALTERNATIVE D: Check the box for no.

ALTERNATIVE E: Explain why neither a module or a mastery test was developed.

FINDINGS:

100% of the evaluators in all three groups (no identification, public school, correction institution) checked the box marked yes.

DATA SOURCE: Page 45, table 1, TOTAL COUNT, question 2.

Not only was a working relationship developed (as established in question 1), but this institute resulted in the production of both modules and mastery tests.

This means that the evaluation of the institute has gone from level 1 to level 2.

Level I refers to participant satisfaction.
Level II refers to participant production of usable products, namely, modules and mastery tests.

PLANNING RECOMMENDATIONS:

Usable products were developed at this institute.

However, the institute evaluation makes no mention of how these products will be used on level III or level IV.

Level III refers to field testing and modification of strategies, products, and materials.
Level IV refers to documenting the benefits accruing to classroom teachers taught by participants of the institute.

In addition, it may be useful to have a catalog of the modules and mastery tests developed.

Since obviously an institute of this nature can permit each participant to produce either a module or mastery test, the quantity level of excellence must be set even higher. In order to come up with an appropriate measure of productivity, it might be advisable to ask how many modules and how many mastery tests were produced.

DETAILED ANALYSIS OF EVALUATION ITEM 2

| | TOTAL | NO IDENTIFICATION | PUBLIC SCHOOL | CORRECTIONAL INSTITUTION |
|---|---|---|---|---|
| BOTH | 29 | 8 | 7 | 14 |
| MODULE | 18 | 6 | 4 | 8 |
| MASTERY TEST | 5 | 2 | 0 | 3 |
| NEITHER | 0 | 0 | 0 | 0 |

The above detailed analysis of evaluation item 2 indicates that

29 evaluators developed both modules and mastery tests.

18 evaluators developed modules.

5 evaluators developed a mastery test.

In general, a module is composed of 4 components:

OBJECTIVES
PREASSESSMENT
LEARNING ACTIVITIES AND ENVIRONMENTS
MASTERY POSTTESTS

If this definition of a module was followed, it would seem that the vast majority of the participants have achieved success.

On the other hand, the way the way the question is answered, it might be that the participants perceived modules and mastery tests as two different elements instead of conceiving a mastery test as the verification of the success of a given module.

## EVALUATION ITEM 3

EVALUATION ITEM TEXT:

Do you feel that what you produced will be useful to you in your teaching situation?

EVALUATOR RESPONSE ALTERNATIVES:

ALTERNATIVE A: Circle yes.

ALTERNATIVE B: Circle 100%.

ALTERNATIVE C: Circle 75%.

ALTERNATIVE D: Circle 50%..

ALTERNATIVE E: Circle 25%.

ALTERNATIVE F: Circle No-0%.

ALTERNATIVE G: Do not circle anything.

ALTERNATIVE H: Comment in response to HOW.

FINDINGS:

100% success or better was claimed by:

25% of all three groups of evaluators.
27% of public school evaluators.
36% of correctional institution evaluators.

75% success or better was claimed by:

73% of the GRAND TOTAL of all evaluators.
82% of public school evaluators.
75% of correctional institution evaluators.

50% success or better was claimed by:

94% of GRAND TOTAL of all evaluators.
91% of public school evaluators.
96% of correctional institution evaluators.

Therefore, it is proposed that at the next meeting:

A. Modules be defined in writing

B. Mastery tests be defined in writing

C. A list of criteria be given in writing that clearly identify acceptable completion of both a module and mastery test

DATA SOURCE:

Page 48, table 4, TOTAL COUNT AND SUBTOTALS CONVERTED TO CUMULATIVE PERCENTAGES, question 3.

Refer especially to findings labeled 3A, 3B, and 3C.

CONCLUSIONS:

More than 90% of the group felt that AT A BARE MINIMUM at least half or more of the material produced will be useful in actual teaching situations.

It might be observed that the comments given in answer to evaluation item 3 provide concrete examples of level II application of teacher institutes to classroom teaching.

PLANNING RECOMMENDATIONS:

So far, the first three questions have produced such an overwhelming positive response that the evaluator must become suspicious of his tactics used for evaluation.

Perhaps, the questions were of such a nature that only a positive response could be given.

Perhaps, the level of quality and expertise expected was set too low when consideration is made of the high caliber of participants in attendance.

Similarly, it can be an eye-opener for teachers to find out about the vastly different types of applications made by similar educators in a different environmental situation.

## EVALUATION ITEM 4

EVALUATION ITEM TEXT:

Did this institute acquaint the public school teachers with the problems and needs of the correctional institutions?

EVALUATOR RESPONSE ALTERNATIVES:

ALTERNATIVE A: Circle yes

ALTERNATIVE B: Circle 100%

ALTERNATIVE C: Circle 75%

ALTERNATIVE D: Circle 50%

ALTERNATIVE E: Circle 25%

ALTERNATIVE F: Circle No-0%

ALTERNATIVE G: Comment in the section marked WHICH ONES ESPECIALLY.

FINDINGS:

100% success is claimed by:

45% of the public school evaluators.
40% of the correctional institution evaluators.

75% or more success is claimed by:

91% of the public school evaluators.
52% of the correctional institution evaluators.

This means that 39% of the public school evaluators held a higher opinion than correctional institution evaluators.

This difference is found to be statisticaly significant on the 1% level of confidence ($P < .01$.)

DATA SOURCE:

Page 48, table 4, TOTAL COUNT AND SUBTOTALS CONVERTED TO CUMULATIVE PERCENTAGES, question 4, finding 4A and finding 4B.

Page 50, DISPLAY 2, TABLUATING TABLE FOR SIGNIFICANT TESTING (Slide rule accuracy), section 4B.

CONCLUSIONS:

91% of the public school evaluators feel that the public school teachers have done a good job in becoming acquainted with the problems and needs of correctional institutions.

This opinion is shared by only 52% of the correctional institution evaluators.

In general, the comments coming from public school evaluators differ from the comments coming from correctional institution evaluators in the sense that there are few overlapping comments.

PLANNING RECOMMENDATIONS:

In order to simplify this process of becoming aware of the problems and needs of correctional institutions, a master list should be developed pinpointing correctional problems.

This master list with correctional problems and needs might include, but not be limited to;

Types of teaching manpower available
Levels of learning
Discipline
Security procedures
Placement
Quorum difficulties
Job placement
Administration problems

Since many of the public school teachers presumed that correctional institution problems were similar to the teaching problems encountered in occupational centers, it might be good to prepare a specific list that would point up the contrasts.

## EVALUATION ITEM 5

EVALUATION ITEM TEXT:

Did this workshop acquaint the correctional teachers more fully with the requirements of occupational subject matter?

EVALUATOR RESPONSE ALTERNATIVES:

ALTERNATIVE A: Circle yes

ALTERNATIVE B: Circle 100%

ALTERNATIVE C: Circle 75%

ALTERNATIVE D: Circle 50%

ALTERNATIVE E: Circle 25%

ALTERNATIVE F: Circle No-0%

ALTERNATIVE G: Comment in the section marked IN WHAT WAY.

FINDINGS:

100% success was claimed by:

27% of public school evaluators
32% of correctional institution evaluators

75% or more success was claimed by:

36% of public school evaluators
64% of correctional institution evaluators

(The level of confidence here is 11%.)
($P < .11$)

50% success or more is claimed by:

45% of public school evaluators
88% of correctional institution evaluators

(The level of confidence here is 1%.)
($P < .01$)

DATA SOURCE:

Page 48, table 4, TOTAL COUNT AND SUBTOTALS CONVERTED TO CUMULATIVE PERCENTAGES, question 5, finding 5A, finding 5B, finding 5C.

Page 50, DISPLAY 2, TABULATING TABLE FOR SIGNIFICANCE TESTING (Slide rule accuracy), section 5B, section 5C.

CONCLUSIONS:

88% of the correctional institution evaluators feel that correctional institution teachers have done at least an average job of becoming acquainted more fully with the requirements of occupational subject matter.

This opinion is shared by only 45% of the public school evaluators.

Allowing for the relative factor that each group will consider itself better than the other group, it still remains that statistically significant differences on the same instrument point up the fact that the public school teachers do not feel that the correctional institution teachers have become sufficiently acquainted with the requirements of occupational subject matter.

PLANNING RECOMMENDATIONS:

During the 3 day institute, it was felt that casual interaction would provide sufficient opportunities for correctional teachers to become more fully acquainted with the requirements of occupational subject matter.

According to the evaluation instrument, this familiarity was neither claimed by correctional institution teachers in large numbers nor backed up by the corresponding opinion of public school teachers.

However, both groups seem to feel that at least an average (50%) type of success was achieved by the interaction.

The comments of public school teachers to question 5 were only 4 in number. This does not give much of an indication of what the correctional institution teachers still have to do.

The comments of correctional institution teachers number 15 and stress specific things that have been clarified.

It might be good for public school teachers to look at the following list and make any additions or suggestions necessary to pinpoint the "requirements of occupational subject matter."

The following occupational subject matter requirements were listed by correctional institution teachers:

Paperwork
Student levels
Uniform curriculum
Performance objectives
Learning mentality
Materials
Specific techniques
Interaction
Modernization
Positive approach
Sources of materials

## EVALUATION ITEM 6

EVALUATION ITEM TEXT:

Did this workshop acquaint both the public school and the correctional institution teachers with the problems encountered in interagency cooperation?

EVALUATOR RESPONSE ALTERNATIVES:

ALTERNATIVE A: Circle yes

ALTERNATIVE B: Circle 100%

ALTERNATIVE C: Circle 75%

ALTERNATIVE D: Circle 50%

ALTERNATIVE E: Circle 25%

ALTERNATIVE F: Circle No-0%

ALTERNATIVE G: Comment in the section marked WHICH PROBLEMS.

FINDINGS:

100% success was claimed by:

36% of the public school evaluators
32% of the correctional institution evaluators

75% or more success was claimed by:

91% of the public school evaluators
64% of the correctional institution evaluators

(The level of confidence is 5%)
($P < .05$)

50% or more success was claimed by:

91% of the public school evaluators
80% of the correctional institution evaluators

DATA SOURCE:

Page 48, table 4, TOTAL COUNT AND SUBTOTALS CONVERTED TO CUMULATIVE PERCENTAGES, question 6, finding 6A, finding 6B, finding 6C.

Page 50, DISPLAY 2, TABULATING TABLE FOR SIGNIFICANT TESTING (Slide rule accuracy) section 6B.

CONCLUSIONS:

At least average success in acquainting both the public school teachers and the correctional institution teachers with some of the problems encountered in interagency cooperation has been claimed by:

91% of public school evaluators
80% of correctional institute evaluators

A better than average success has been claimed by:

91% of public school evaluators
64% of correctional institution evaluators

In the perspective of question 4 and question 5, the results of question 6 can be interpreted to mean that even though technical correctional institution requirements and technical occupational subject matter requirements have not been completely mastered, the two groups have got together and untangled some of the problems that arise whenever interagency cooperation occurs.

PLANNING RECOMMENDATIONS:

Specific problems encountered in interagency cooperation were enumerated as follows:

Bureaucratic protocol
Eliminating red tape
Preplanning visits
Security requirements
Lack of standardization
Difference in student types

If other problems are envisioned by the planners of the institution, it might be a good idea to prespecify these problems and to direct the responses to pinpoint priority problems.

## EVALUATION ITEM 7

EVALUATION ITEM TEXT:

Before this workshop have you ever been involved in any way with occupational modules?

EVALUATOR RESPONSE ALTERNATIVES:

ALTERNATIVE A: Check the box for yes.

ALTERNATIVE B: Check the box for no.

ALTERNATIVE C: Comment in the section marked SPECIFY.

FINDINGS:

73% of the public school evaluators checked the box marked yes.

36% of the correctional institution evaluators checked the box marked yes.

(The level of confidence here is 5%)
($P < .05$)

($P > .01$)

DATA SOURCE:

Page 48, table 4, TOTAL COUNT AND SUBTOTALS CONVERTED TO CUMULATIVE PERCENTAGES, question 6, finding 7.

CONCLUSIONS:

Both public school evaluators and correctional institution evaluators claim familiarity with modules.

The statistical difference would indicate that more public school teachers than correctional institution teacher are familiar with modules.

Looking at the comments to question 7 reveals that modules have been studied in a number of different environments:

Inservice education
Teacher training
Private industry
Personal experience

PLANNING RECOMMENDATIONS:

Question 7 has elicited from the participants how each participant was previously exposed to modules.

It might be worthwhile during a future institute to find out how each participant actually USES modules in teaching, testing, and programming.

The professional evaluator must develop a tendency to mistrust data that is supported only by opinion and not by hard product.

This means that it strikes the present evaluator as unusual that so many claims were made for modules without several modules being actually presented as evidence.

At the next institute, it might be a good idea to request participants to list the following for each module they have already produced.

Name of module
Name of author
Address of author
Procedures to obtain a copy

This kind of information would provide a baseline of what already exists. Such a baseline would prevent needless duplication of existing materials.

## EVALUATION ITEM 8

EVALUATION ITEM TEXT:

Do you feel that this institute aided you in the development of a modular approach for your course of study?

EVALUATOR RESPONSE ALTERNATIVES:

ALTERNATIVE A: Circle yes

ALTERNATIVE B: Circle 100%

ALTERNATIVE C: Circle 75%

ALTERNATIVE D: Circle 50%

ALTERNATIVE E: Circle 25%

ALTERNATIVE F: Circle No-0%

ALTERNATIVE G: Comment in the section marked HOW

FINDINGS:

75% success was claimed by:

46% of public school evaluators.
64% of correctional institution evaluators.

50% or more success was claimed by:

92% of public school evaluators.
80% of correctional institution evaluators.

DATA SOURCE:

Page 48, table 4, TOTAL COUNT AND SUBTOTALS CONVERTED TO CUMULATIVE PERCENTAGES, question 8, finding 8A, finding 8B.

CONCLUSIONS:

Approximately 80% of all participants feel that the institute was at 50% successful.

The comments on question 8 give specific examples of why this institute was considered successful.

In these comments, it is to be noted that certain participants started at zero as far as awareness of modules was concerned.

PLANNING RECOMMENDATIONS:

As in evaluation item 2, it is recommended that participants be exposed to at least 4 different levels of the modular approach:

Level I: Participants develop modules composed of

- Objectives
- Preassessment
- Learning activities
- Mastery posttest

Level II: Participants use modules with small groups of learners in order to debug the modules.

Level III: Participants field test modules with large groups of learners.

Level IV: Participants document the effectiveness of modules in producing measurable learner success.

In this way, beginners can concentrate on Level I while those who have already mastered Levels I and II can concentrate on Levels III and IV.

This will enable each participant to specify the number of levels of progress that have been achieved during a given session.

There is always something for a teacher to learn new about modules. Unless a challenge is provided for the advanced and unless remediation is provided for those unfamiliar, such a workshop can be at cross purposes as the speakers try to please both those possessed of advanced information about modules and those possessed of no information about modules.

WHICH AGENDA?
WHICH AGENDA??
WHICH AGENDA???

As a footnote to the above, it might be observed that the evaluator was presented with three different agendas for the same institute.

Obviously, one agenda was prepared several weeks before the institute. Similarly, the second agenda was probably prepared a week or so before the institute. This means that the final agenda may have been confirmed as late as the night before the institute.

These changes were most likely motivated by sudden insights and last minute planning. However, such sudden insights and last minute planning have a disasterous effect on both staff and participants who come expecting one thing and find another.

In order to succeed, an agenda

A. Must be established in advance,
B. Must be acceptable to all concerned, and
C. Must be adhered to and followed.

If a meeting starts off with the anticipated agenda being annuled as the first activity on the docket, participants can be expected to manifest confusion, uncertainity, and insecurity.

It is much more reassuring to arrive at a meeting knowing what to expect and to witness expectations becoming reality.

# PART II

## HOW TO DEVELOP EVALUATION SUMMARIES AND COMPLETE EVALUATION REPORTS

Readers have had a chance to exam both the EVALUATION SUMMARY FORMAT and the COMPLETE EVALUATION REPORT FORMAT in part I.

From a practical point of view, the evaluation summary format is the typical end product of most evaluations. After all, the evaluation summary format summarizes all vital information in the form of conclusions and recommendations. It is not unusual for an evaluation summary to be rounded out with more details placed in an appendix. The typical appendix contains forms, displays, data tables, and evaluator comments.

From a developmental point of view, the complete evaluation report format contains the 101 things that were spelled out in the mind of the overall evaluator who tabulated and consolidated the individual evaluation forms of many evaluators.

As is obvious from a cursory glance of part I, every evaluator makes a selection from the total components of the complete evaluation report in order to fit the particular objectives of a specific evaluation.

Except in rare exceptions, the typical complete evaluation report will be much shorter in length and words than the sample presented in part I. The sample in part I is extra long in order to make sure that a wide variety of alternatives is presented from which the evaluator may choose the most appropriate components.

Decisions require information. Evaluation summaries and complete evaluation reports are conceived as practical ways to provide information in a format that can lead to effective decisions.

## MODIFY THE EXISTING FORM FOR COMPARABILITY

There is no need to develop a special evaluation form to use with the methods herein explicated.

However, it is necessary that the existing form be modified, if necessary, for comparability.

Comparability means being able to identify the TYPE OF PERSON who filled out a specific form. This is not the same as identifying the INDIVIDUAL who filled out a specific form.

One simple way to do this is to provide a question on the form that identifies the type of respondent or the group in which the respondent is placed.

## PRACTICAL EXAMPLE

Look at form A found on page 43.

This form is a modified version of a previously used form.

The basic modification was to add a small section wherein each evaluator is identified as being either a public school educator or a correctional institution educator.

There are two practical pieces of advice here:

> First, make sure that the group identification provided is sufficient to cover the entire range of possibilities. To make sure of this, it is sometimes advisable to add a group characterized as OTHER.
>
> Second, make sure that enough attention is given to this group identification so that each evaluator checks off the appropriate space. This additional stress avoids coming up with a large NO IDENTIFICATION group.

EVALUATE

EACH EVALUATION ITEM

FOR EACH EVALUATOR GROUP

Some evaluation tabulators make the error of coming up with the total count as the first end product.

This error is time consuming for two reasons:

First, it is more accurate to add up each individual group and then doublechecked with the group total.

Second, when the counts from two or three groups are merged into a total count, the total count often gives the impression of a total group concensus that is not present.

PRACTICAL EXAMPLE

Look at the following tabulation table.

On the left hand side, the following is identified:

Item number
Response alternatives
Space for yes
Space for no
Space for NR (No response)

Across the top, the overall total and three group subtotals are identified:

Total
No Identification
Public School
Correctional Institution

| Item 1<br>Response Alternative | Total | No Identification | Public School | Correctional Institution |
|---|---|---|---|---|
| Yes | | | | |
| No | | | | |
| NR (No response) | | | | |

The fastest way to tabulate is to take the no identification group and divide the papers into three piles: yes, no, and NR.

After each pile has been sorted and doublechecked, the count for each pile is put in the appropriate space.

The same thing is done with the public school pile and the correctional institution pile.

It is important that the right hand side of the tabulation page specify all groups being counted.

In proceeding to item 3, the response alternatives on the left hand side would include:

Yes
100%
75%
50%
25%
No-0%
NR

This would simply mean adding more lines to the left hand column of a tabulation page AND making sure that a different pile was used for each of the possible response alternatives.

The time to check and recheck the count is before filling in the exact number on the tabulation page.

After all the groups have been counted, the total score can be determined by addition and by double checking to avoid arithmetic errors. An empty sample tabulating table appears below:

| Item 3<br>Response Alternative | Total | No Identification | Public School | Correctional Institution |
|---|---|---|---|---|
| Yes | | | | |
| 100% | | | | |
| 75% | | | | |
| 50% | | | | |
| 25% | | | | |
| No-0% | | | | |
| NR | | 41 | | |

## SUMMARIZE ALL TABULATION DATA IN A ONE PAGE TOTAL COUNT AND SUBTOTAL TABLE

Look immediately at table 2, TOTAL COUNT AND SUBTOTALS, found on page 46.

This page represents the one page end product of the above procedure performed on the data used to illustrate this evaluation method.

Note the following:

A. The range of alternatives are placed on the left hand side.

B. The groups are placed in order from left to right as follows:

Totals
No identification
Public schools
Correctional institution

C. The columns going from left to right are given a large amount of space because only 8 questions are summarized. If more than 8 questions were summarized, the page would be divided into two columns, 8 questions on the left, 8 questions on the right.

D. The listing of alternatives in the left hand column form a Likert ranging from yes to 0 and no response.

E. Because the three subgroups are unequal in number, it is very difficult to draw conclusions by looking at the numbers.

## TRANSFORM TO PERCENTAGES

### TRANSFORM THE "TOTAL COUNT AND SUBTOTALS" TABLE INTO A TABLE SPECIFYING "TOTAL COUNT AND SUBTOTALS CONVERTED TO PERCENTAGES"

Look at table 3, TOTAL COUNT AND SUBTOTALS CONVERTED TO PERCENTAGES, found on page 47.

This table represents the end product of the above procedure.

Note the following:

A. Since all respondents chose the same response for items 1 and 2, further statistical treatment of these items is unnecessary. Findings can be made immediately.

B. Conversion to percentages enables each individual response alternative to be studied on a group by group basis. Placing a ruler under each line enables the reader to isolate the comparisons desired.

C. The groupings have been placed more closely together on the left hand side in order to facilitate comparisons. As is evident, there is room for still other analyses on the same page.

D. In a percentage table, special notice should be given to outstanding high percentages. For example:

Look at 81% and 73% in item 7.
Look at 50% and 55% in item 3.
Look at 50% and 55% in item 5.
Look at 55% in item 6.
Look at 50% in item 8.

Each of these noticably different percentages should be examined for possible clues leading to the identification of underlying trends in the data.

E. When one wishes to draw an overall conclusion about the trend of alternative responses, table 3 becomes inadequate. A cumulative percentage analysis is necessary to understand overall trends.

## USE PERCENTAGE TABLES WHILE TRANSFORMING TO PERCENTAGES

We all know that $\frac{1}{2}$ is 50% and that 1/4 is 25%.

For these simple numbers, we don't have to use percentage tables.

Whenever a conversion is made from a count to a percentage, it is advisable to use a percentage table.

For examples of percentage tables, see display 3, display 4 and display 5 on pages 51, 52, and 53.

These tables provide accuracy, consistency, and speed in the process of transforming numbers into percentages.

In addition, tables of percentage equivalents can be used to go backwards from percentages to the number of individuals represented by a particular percentage.

As a rule of thumb, percentage tables are accurate enough for most uses when not carried to decimal points. However, it must be noted that certain subtotals require rounding off in order to make sure that each subgroup has a total of 100 rather 99 or 101. Whenever this is done, make sure that the degree of accuracy as measured by the sample size is left intact.

## CONVERT TO CUMULATIVE PERCENTAGES

### CONVERT THE "TOTAL COUNT AND SUBTOTALS CONVERTED TO PERCENTAGES" TABLE INTO A TABLE SPECIFYING "TOTAL COUNT AND SUBTOTAL CONVERTED TO CUMULATIVE PERCENTAGES"

Look at table 4, TOTAL COUNT AND SUBTOTALS CONVERTED TO CUMULATIVE PERCENTAGES, found on page 48.

Table 4 is an example of the end product of the above procedure.

Note the following:

A. Several findings have been pinpointed for each item.

B. In general, the finding boiled down to pinpointing:

Evaluator agreement
Evaluator disagreement

C. Evaluator agreement can be used to specify both concensus and the degree of concensus.

D. Evaluator disagreement can be used to pinpoint divergent interpretations.

E. Significant evaluator disagreements have been statistically tested in order to determine the level of confidence.

F. The lower the level of confidence, the less chance of statistical error.

G. It must be remembered that because of the varying sizes of each subgroup, no one rule can be laid down for how many percentage points of difference constitute a significant difference. Each individual difference must be tested separately.

TECHNICAL NOTE:

Individuals who wish to understand the statistical test used to test the difference between percentages are referred to display 1, COMPUTING THE SIGNIFICANCE OF DIFFERENCE IN PERCENTAGES, found on page .

## CATEGORIZE THE COMMENTS OF EVALUATORS

## ITEM BY ITEM

Look at page 54, COMMENTS ON ITEM 1, which does the following:

A. All comments are reproduced

B. All comments are separated into the three groups of:

No identification
Public School
Correctional Insitutions

C. A subtotal of comments is made for each subgroup

D. A grand total of comments is made for all subgroups

Look at page 56, COMMENTS ON ITEM 3,

In addition to the above functions, this listing of comments further subdivide the comments into two groups:

Group 1 reproduces the comments who evaluated item 3 75% or above.

Group 2 summarizes the comments of those who evaluated item 3 50% or below.

In the interpretation of item 3, it is interesting to note that those individuals who made a positive evaluation followed up with a larger number of comments.

Similarly, those individuals who made a negative or lower evaluation were unable to specify exactly the cause of the lower evaluation.

Those interested in actually going through the mathematical statistics used to ascertain the level of probability are referred to display 2, TABULATING TABLE FOR SIGNIFICANCE TESTING (SLIDE RULE ACCURACY), found on page .

It is to be noted that the placing of data in column fashion proceeding from top to bottom permits the statistician to double check visually the accuracy of all computations.

It is noted that in most cases, slide rule accuracy is equivalent to the additional decimal places that could obtained easily be using an electronic calculator.

The error curve for testing the difference between percentages with the sample size below 200 individuals is such that slide rule accuracy is just as discriminating as electronic calculator accuracy.

In the case where the sample size would exceed 200, a much smaller percentage difference in responses would be found statistically significant.

Two blank columns have been left on the right hand side of display 2 in order to provide space for readers who wish to practice, utilize, or try out this test of statistical significance. The formula appearing in display 1 has been translated into the 18 sequencial steps found in display 2.

FORM A

INSTITUTE EVALUATION

DIRECTIONS: Check the box for Yes or No on questions 1, 2, and 7. For the other questions, circle the percentage from Yes (100%) to No (less than 25%) that best answers the yes-no type questions. When appropriate, add comments and explanation in the same space.

| CHECK ONE: | I work for a | ☐ public school<br>☐ correctional institution | |
|---|---|---|---|
| 1. Do you feel that this meeting between public school teachers and correctional teachers has produced a working relationship? | 1. | ☐ Yes<br>☐ No | How? |
| 2. Was a MODULE or MASTERY test completed as a result of this institute? | 2. | ☐ Yes → Which?<br>☐ Module<br>☐ Mastery test<br>☐ No → Why not? | |
| 3. Do you feel that what you produced will be useful to you in your teaching situation? | 3. | Yes- 100% 75% 50% 25% No-0%<br>How? | |
| 4. Did this institute acquaint the public school teachers with the problems and needs of the correctional institutions? | 4. | Yes- 100% 75% 50% 25% No-0%<br>Which ones especially? | |
| 5. Did this workshop acquaint the correctional teachers more fully with the requirements of occupational subject matter? | 5. | Yes- 100% 75% 50% 25% No-0%<br>In what way? | |
| 6. Did this workshop acquaint both the public school teachers and the correctional teachers with some of the problems encountered in interagency cooperation? | 6. | Yes- 100% 75% 50% 25% No-0%<br>Which problems? | |
| 7. Before this workshop have you ever been involved in any way with occupational modules? | 7. | ☐ Yes<br>☐ No | Specify. |
| 8. Do you feel that this institute aided you in the development of a modular approach for your course of study? | 8. | Yes- 100% 75% 50% 25% No-0%<br>How? | |
| Please add any other comments about this institute, or about this interagency | | Comments may be written on the other side of this page. | |

FORM B

TABULATION TABLE

| ITEM # | Total (All groups) | Subtotal Group 1 | Subtotal Group 2 | Subtotal Group 3 | Subtotal Group 4 | Subtotal Group 5 |
|---|---|---|---|---|---|---|
| Response Alternative A: | | | | | | |
| Response Alternative B: | | | | | | |
| Response Alternative C: | | | | | | |
| Response Alternative D: | | | | | | |
| Response Alternative E: | | | | | | |
| Response Alternative F: | | | | | | |
| Response Alternative G: | | | | | | |

TABLE 1

TOTAL COUNT

| ITEM | RESPONSE GIVEN |
|---|---|
| 0) | 16 = No Identification |
| | 11 = Public School |
| | 25 = Correctional Institution |
| 1) | 52 = Yes |
| | 0 = No |
| | 0 = No Response |
| 2) | 52 = Yes |
| | 0 = No |
| | 0 = No Response |
| 3) | 1 = Yes |
| | 13 = 100% |
| | 24 = 75% |
| | 11 = 50% |
| | 0 = 25% |
| | 1 = 0% |
| | 2 = No Response |
| 4) | 9 = Yes |
| | 13 = 100% |
| | 14 = 75% |
| | 4 = 50% |
| | 1 = 25% |
| | 0 = 0% |
| | 11 = No Response |
| 5) | 5 = Yes |
| | 10 = 100% |
| | 17 = 75% |
| | 9 = 50% |
| | 1 = 25% |
| | 3 = 0% |
| | 7 = No Response |
| 6) | 9 = Yes |
| | 7 = 100% |
| | 21 = 75% |
| | 5 = 50% |
| | 3 = 25% |
| | 1 = 0% |
| | 6 = No Response |
| 7) | 20 = Yes |
| | 32 = No |
| 8) | 4 = Yes |
| | 8 = 100% |
| | 20 = 75% |
| | 10 = 50% |
| | 8 = 25% |
| | 1 = 0% |
| | 1 = No Response |

TABLE 2

TOTAL COUNT AND SUBTOTALS

| RESPONSE GIVEN | ITEM | TOTAL | NO IDENT. | PUBLIC SCHOOLS | CORRECTIONAL INST. |
|---|---|---|---|---|---|
| Yes | 1) | 52 | 16 | 11 | 25 |
| No | | 0 | 0 | 0 | 0 |
| No Response | | 0 | 0 | 0 | 0 |
| Yes | 2) | 52 | 16 | 11 | 25 |
| No | | 0 | 0 | 0 | 0 |
| No Response | | 0 | 0 | 0 | 0 |
| Yes | 3) | 1 | 0 | 0 | 1 |
| 100% | | 13 | 2 | 3 | 8 |
| 75% | | 24 | 8 | 6 | 10 |
| 50% | | 11 | 5 | 1 | 5 |
| 25% | | 0 | 0 | 0 | 0 |
| 0% | | 1 | 0 | 1 | 0 |
| No Response | | 2 | 1 | 0 | 1 |
| Yes | 4) | 9 | 2 | 1 | 6 |
| 100% | | 13 | 5 | 4 | 4 |
| 75% | | 14 | 6 | 5 | 3 |
| 50% | | 4 | 0 | 1 | 3 |
| 25% | | 1 | 0 | 0 | 1 |
| 0% | | 0 | 0 | 0 | 0 |
| No Response | | 11 | 3 | 0 | 8 |
| Yes | 5) | 5 | 2 | 1 | 2 |
| 100% | | 10 | 2 | 2 | 6 |
| 75% | | 17 | 8 | 1 | 8 |
| 50% | | 9 | 2 | 1 | 6 |
| 25% | | 1 | 0 | 0 | 1 |
| 0% | | 3 | 1 | 0 | 2 |
| No Response | | 7 | 1 | 6 | 0 |
| Yes | 6) | 9 | 3 | 2 | 4 |
| 100% | | 7 | 1 | 2 | 4 |
| 75% | | 21 | 7 | 6 | 8 |
| 50% | | 5 | 1 | 0 | 4 |
| 25% | | 3 | 0 | 1 | 2 |
| 0% | | 1 | 0 | 0 | 1 |
| No Response | | 6 | 4 | 0 | 2 |
| Yes | 7) | 20 | 3 | 8 | 9 |
| No | | 32 | 13 | 3 | 16 |
| Yes | 8) | 4 | 1 | 1 | 2 |
| 100% | | 8 | 2 | 1 | 5 |
| 75% | | 20 | 8 | 3 | 9 |
| 50% | | 10 | 2 | 4 | 4 |
| 25% | | 8 | 2 | 1 | 5 |
| 0% | | 1 | 0 | 1 | 0 |
| No Response | | 1 | 1 | 0 | 0 |

TABLE 3

## TOTAL COUNT AND SUBTOTALS CONVERTED TO PERCENTAGES

(Rounding has been performed question by question to maintain a total of 100%)

| RESPONSE GIVEN | ITEM | TOTAL | NO ID. | PUBLIC SCHOOL | CORR. INST. | |
|---|---|---|---|---|---|---|
| Yes | 1) | 100% | 100% | 100% | 100% | → Finding 1 |
| No | | 0 | 0 | 0 | 0 | |
| No Response | | 0 | 0 | 0 | 0 | |
| Yes | 2) | 100 | 100 | 100 | 100 | → Finding 2 |
| No | | 0 | 0 | 0 | 0 | |
| No Response | | 0 | 0 | 0 | 0 | |

| | | TOTAL | NO ID | P.S. | C.I. |
|---|---|---|---|---|---|
| Yes | 3) | 2 | 0 | 0 | 4 |
| 100% | | 25 | 13 | 27 | 32 |
| 75% | | 46 | 50 | 55 | 40 |
| 50% | | 21 | 31 | 9 | 20 |
| 25% | | 0 | 0 | 0 | 0 |
| 0% | | 2 | 0 | 9 | 0 |
| No Response | | 4 | 6 | 0 | 4 |
| Yes | 4) | 17 | 13 | 9 | 24 |
| 100% | | 25 | 31 | 36 | 16 |
| 75% | | 27 | 37 | 46 | 12 |
| 50% | | 8 | 0 | 9 | 12 |
| 25% | | 2 | 0 | 0 | 12 |
| 0% | | 0 | 0 | 0 | 4 |
| No Response | | 21 | 19 | 0 | 32 |
| Yes | 5) | 10 | 12.5 | 9 | 8 |
| 100% | | 19 | 12.5 | 18 | 24 |
| 75% | | 33 | 50 | 9 | 32 |
| 50% | | 17 | 13 | 9 | 24 |
| 25% | | 2 | 0 | 0 | 4 |
| 0% | | 6 | 6 | 0 | 8 |
| No Response | | 13 | 6 | 55 | 0 |
| Yes | 6) | 17 | 19 | 18 | 16 |
| 100% | | 13 | 6 | 18 | 16 |
| 75% | | 40 | 44 | 55 | 32 |
| 50% | | 10 | 6 | 0 | 16 |
| 25% | | 6 | 0 | 9 | 8 |
| 0% | | 2 | 0 | 0 | 4 |
| No Response | | 12 | 25 | 0 | 8 |
| Yes | 7) | 38 | 19 | 73 | 36 |
| No | | 62 | 81 | 27 | 64 |
| Yes | 8) | 8 | 5.5 | 9 | 8 |
| 100% | | 15 | 13 | 9 | 20 |
| 75% | | 39 | 50 | 28 | 36 |
| 50% | | 19 | 13 | 36 | 16 |
| 25% | | 15 | 0 | 9 | 20 |
| 0% | | 2 | 0 | 9 | 0 |
| No Response | | 2 | 5.5 | 0 | 0 |

**TABLE 4**

| RESPONSE GIVEN | ITEM | TOTAL | NO IDENTIFICATION | PUBLIC SCHOOL | CORRECTIONAL INST. | TOTAL COUNT AND SUBTOTALS CONVERTED TO CUMULATIVE PERCENTAGES | Confidence Levels of Differences Between P.S. and C.I. |
|---|---|---|---|---|---|---|---|
| Yes | 3) | 2 | 0 | 0 | 4 | | |
| 100% | | 27 | 13 | 27 | 36 | Finding 3A | |
| 75% | | 73 | 63 | 82 | 76 | Finding 3B | |
| 50% | | 94 | 94 | 91 | 96 | Finding 3C | |
| 25% | | 94 | 94 | 91 | 96 | | |
| 0% | | 96 | 94 | 100 | 96 | | |
| No Response | | 100 | 100 | 100 | 100 | | |
| Yes | 4) | 17 | 13 | 9 | 24 | | |
| 100% | | 42 | 44 | 45 | 40 | Finding 4A | |
| 75% | | 69 | 81 | 91 | 52 | Finding 4B | $P < .01$ |
| 50% | | 77 | 81 | 100 | 64 | | |
| 25% | | 79 | 81 | 100 | 68 | | |
| 0% | | 79 | 81 | 100 | 68 | | |
| No Response | | 100 | 100 | 100 | 100 | | |
| Yes | 5) | 10 | 12.5 | 9 | 8 | | |
| 100% | | 29 | 25 | 27 | 32 | Finding 5A | |
| 75% | | 62 | 75 | 36 | 64 | Finding 5B | $P < .10$ |
| 50% | | 79 | 88 | 45 | 88 | Finding 5C | $P < .11$ |
| 25% | | 81 | 88 | 45 | 92 | | |
| 0% | | 87 | 94 | 45 | 100 | | |
| No Response | | 100 | 100 | 100 | 100 | | |
| Yes | 6) | 17 | 19 | 18 | 16 | | |
| 100% | | 30 | 25 | 36 | 32 | Finding 6A | |
| 75% | | 70 | 69 | 91 | 64 | Finding 6B | $P < .05$ |
| 50% | | 80 | 75 | 91 | 80 | Finding 6C | |
| 25% | | 86 | 75 | 100 | 88 | | |
| 0% | | 88 | 75 | 100 | 92 | | |
| No Response | | 100 | 100 | 100 | 100 | | |
| Yes | 7) | 38 | 19 | 73 | 36 | Finding 7 | $P < .01$ $P < .05$ |
| No | | 100 | 100 | 100 | 100 | | |
| Yes | 8) | 8 | 5.5 | 9 | 8 | | |
| 100% | | 23 | 18.5 | 18 | 28 | | |
| 75% | | 62 | 68.5 | 46 | 64 | Finding 8A | |
| 50% | | 81 | 81.5 | 82 | 80 | Finding 8B | |
| 25% | | 96 | 94.5 | 91 | 100 | | |
| 0% | | 98 | 94.5 | 100 | 100 | | |
| No Response | | 100 | 100 | 100 | 100 | | |

## DISPLAY 1

### COMPUTING THE SIGNIFICANCE OF A DIFFERENCE IN PERCENTAGE

PSN = Number of P.S. (read from Table 1, question 0).

P.S.% = % (read from Table 3 or 4 for each question).

CIN = Number of C.I. (read from Table 1, question 0).

C.I.% = % (read from Table 3 or 4 for each question).

$$\text{DIFFERENCE IN PERCENTAGE} = [\text{P.S.\%}] - [\text{C.I.\%}]$$

$$\text{Standard Deviation of the Difference} = \sigma_{diff} = \sqrt{\frac{(\text{P.S.\%})\ (100\% - \text{P.S.\%})}{\text{PSN}} - \frac{(\text{C.I.\%})\ (100\% - \text{C.I.\%})}{\text{CIN}}}$$

$$Z = \frac{\text{Difference in Percentage}}{\sigma \text{ Difference}}$$

**Z-CHART**

| If Z is greater than: | Then the level of confidence is: | | |
|---|---|---|---|
| | % | Proportion | Chances |
| 1.29 | 20% | .20 | 1 in 5 |
| 1.64 | 10% | .10 | 1 in 10 |
| 1.96 | 5% | .05 | 1 in 20 |
| 2.57 | 1% | .01 | 1 in 100 |
| 3.27 | .1% | .001 | 1 in 1000 |

DISPLAY 2
Tabulating Table for Significance Testing
(Slide Rule Accuracy)

| Raw Content | Step # | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Item being tested statistically | • | 4B | 5B | 5C | 6B | 7 | | |
| TOTAL Number in Group I | (1) | 11 | 11 | 11 | 11 | 11 | | |
| % of Group I Giving Response "R" to Question "Q" | (2) | 91 | 36 | 45 | 91 | 73 | | |
| 100% minus Step 2 | (3) | 9 | 64 | 55 | 9 | 27 | | |
| Rounded Off Product of Step 1 Multiplied by Step 2 | (4) | 820 | 2300 | 2480 | 820 | 1970 | | |
| Step 4 Divided by Step 1 | (5) | $\frac{820}{11}$ | $\frac{2300}{11}$ | $\frac{2480}{11}$ | $\frac{820}{11}$ | $\frac{1970}{11}$ | | |
| Answer to Step 5 | (6) | 75 | 210 | 225 | 74.5 | 178 | | |
| TOTAL Number in Group II | (7) | 25 | 25 | 25 | 25 | 25 | | |
| % of Group II Giving Response "R" to Question "Q" | (8) | 52 | 64 | 88 | 64 | 36 | | |
| 100% minus Step 8 | (9) | 48 | 36 | 12 | 36 | 64 | | |
| Rounded Off Product of Step 8 Multiplied by Step 9 | (10) | 2500 | 2300 | 1055 | 2300 | 2300 | | |
| Step 10 Divided by Step 7 | (11) | $\frac{2500}{25}$ | $\frac{2300}{25}$ | $\frac{1055}{25}$ | $\frac{2300}{25}$ | $\frac{2300}{25}$ | | |
| Answer to Step 11 | (12) | 100 | 92 | 42 | 92 | 92 | | |
| Sum of Step 6 and Step 12 | (13) | 175 | 302 | 267 | 166.5 | 270 | | |
| Square Root of Step 13 | (14) | 13.2 | 17.4 | 16.3 | 12.9 | 16.4 | | |
| Difference Between Step 12 and Step 8 | (15) | 91 - 48 =39 | 64 - 36 =28 | 88 - 45 =43 | 91 - 64 =27 | 73 - 36 =37 | | |
| Step 15 Divided by Step 14 | (16) | $\frac{39}{13.2}$ | $\frac{28}{17.4}$ | $\frac{43}{16.3}$ | $\frac{27}{12.9}$ | $\frac{37}{16.4}$ | | |
| Answer to Step 16 | (17) | 2.95 | 1.63 | 2.64 | 2.09 | 2.26 | | |
| Level of Probability from Z-Chart | (18) | $p < .01$ | $p < .11$ $p > .10$ | $.p < .01$ | $p < .05$ | $p < .05$ $p > .01$ | | |

DISPLAY 3

Percentage Equivalents
On a Base of 11

1/11 = 9%

2/11 = 18%

3/11 = 27%

4/11 = 36%

5/11 = 46%

6/11 = 55%

7/11 = 64%

8/11 = 73%

9/11 = 82%

10/11 = 91%

11/11 = 100%

DISPLAY 4

Percentage Equivalents
On a Base of 16

1/16 = 6%

2/16 = 13%

3/16 = 19%

4/16 = 25%

5/16 = 31%

6/16 = 38%

7/16 = 44%

8/16 = 50%

9/16 = 56%

10/16 = 63%

11/16 = 69%

12/16 = 75%

13/16 = 81%

14/16 = 88%

15/16 = 94%

16/16 = 100%

## Percentage Equivalents On a Base of 52

1/52 = 2%
2/52 = 4%
3/52 = 6%
4/52 = 8%
5/52 = 10%

6/52 = 12%
7/52 = 13%
8/52 = 15%
9/52 = 17%
10/52 = 19%

11/52 = 21%
12/52 = 23%
13/52 = 25%
14/52 = 27%
15/52 = 29%

16/52 = 31%
17/52 = 33%
18/52 = 35%
19/52 = 37%
20/52 = 38%

21/52 = 40%
22/52 = 42%
23/52 = 44%
24/52 = 46%
25/52 = 48%

26/52 = 50%
27/52 = 52%
28/52 = 54%
29/52 = 56%
30/52 = 58%

31/52 = 60%
32/52 = 61%
33/52 = 63%
34/52 = 65%
35/52 = 67%

36/52 = 69%
37/52 = 71%
38/52 = 73%
39/62 = 75%
40/52 = 77%

41/52 = 79%
42/52 = 80%
43/52 = 82%
44/52 = 84%
45/52 = 86%

46/52 = 88%
47/52 = 90%
48/52 = 92%
49/52 = 94%
50/52 = 96%

51/52 = 98%
52/52 = 100%

COMMENTS ON ITEM 1

| NO IDENTIFICATION | PUBLIC SCHOOL | CORRECTIONAL INSTITUTION |
|---|---|---|
| Exchanged views, problems, ideas, course content, equivalent information. | Understanding exchange of views. | By interaction with peers and also by finding out shop layouts. |
| It is an opportunity to receive an insight of the public schools concept of vocational education. | Exchange of views. | Resolving mutual problems. Feeling of confidence that we are following similar teaching patterns. |
| Exchanged ideas from each other and help. | Exchange of ideas, materials, address's for free information and materials. | Exchange of ideas. |
| Exchange of ideas methodology. | Communication and exchange of ideas. | Some of the problems are the same. |
| Exchange of ideas. | Interaction between both D.C.S. and public school instructors. | Exchange of home and phone address. Discussion of mutual problems. |
| It provided an excellent opportunity to exchange ideas and to discuss various training methods as well as lesson organization. | We teach similar curriculums and will exchange teaching aides and A-V materials. | It was a chance to meet with other related trade instructors and discuss common problems. |
| Getting to know each other and the free flow of mutual information. | Exchange of ideas. | Exchange of ideas and info. of recent issue. |
| We got to know that we all pretty much have the same problems. | Idea exchange. Development of objectives. | By exchange of ideas-views similar problems. |
| A better understand of each other's problems. | The CI teachers seem well informed and interested. We have much to offer them in areas of faculty-equip.-behavioral objectives. | Exchange of concepts & ideas were of great value. |
| Exchange of ideas. | Mutual exchange of ideas and interesting experiences. | Interaction of ideas, methods and techniques. |
| We more fully understand our mutual problems that we did no know about before. | | Interaction in the form of exchange of methodology and materials. |
| Exchange of ideas. | | Same basic problems. |
| By comparing shops and trade information. | | Exchange of ideas and a hand-out w/names & addresses of those in attendance. |
| Interchange of ideas. | | Exchange of ideas and teaching concepts. |
| Have a better understanding of their operation. Getting to know other teachers. | | Understand each other problems. |
| (15 comments) | (10 comments) | (Continued on next page) |

COMMENTS ON ITEM 1
(Con't)

| NO IDENTIFICATION | PUBLIC SCHOOL | CORRECTIONAL INSTITUTION |
|---|---|---|
| | | Exchanging of ideas and forming a beginners test. |
| | | Better understanding between instructors. |
| | | Idea exchange. |
| | | Exchange of teaching ideas and operation of shops. |
| | | Exchange of information. |
| | | (20 comments) |
| | | (Grand total 45) |

COMMENTS ON ITEM 3
(75% or above)

| NO IDENTIFICATION | PUBLIC SCHOOL | CORRECTIONAL INSTITUTION |
|---|---|---|
| A better means of beginning & end results. | 100% as of Sept. 75 - in the process of establishing completed modules now for 75-75 school years. | Because of previous exposure and interest in module teaching. |
| Help in teaching new class of students. | Tool control, discipline measurement. | Developing module lesson and outline to cope with quick changing student population. |
| Developing a course outline for Heating that we did not have. | Time saver. | By developing an outline. |
| Perhaps it will enable myself, being a new voc. inst. to better organize my lesson plans. | Course outlined course literature exchange thru mail. | Develop outline and literature through instruction. |
| Gave us a better teaching plan. | To develop modular lesson to help the changing population. | Can be used on an individual basis - expect to carry on. |
| Better knowledge. | As a start to the entire course. | New shop - new instructor - gives me a sense of direction. |
| This module will become a lesson plan for my program. | Help to individualize instruction. | Better concept of what direction of inst. approaches to use. |
| Test student entrance ability. | | It completes one module now for expansion on the other. (Cont |
| (8 comments) | (7 comments) | |
| (50% or below) | | |
| Incomplete as it now exists. | It is a working module that will be used for that subject. | By covering the ref. aspect of major/minor application. |
| I didn't need another test. I have adequate ones to fit my situation. | | More definite course of study. |
| Course outlines cope with changing population. | | I am involved in diesel engines. |
| (3 comments) | (1 comment) | (3 comments) |

COMMENTS ON ITEM 3
(75% or above)
(Con't)

| NO IDENTIFICATION | PUBLIC SCHOOL | CORRECTIONAL INSTITUTION |
|---|---|---|
| | | On pretesting men. |
| | | In curriculum design. |
| | | Standard between faculty. |
| | | To move in some future direction. |
| | | It will produce better students in knowing what level in starting. |
| | | (Continued from 75% or above) |
| | | (13 comments) |
| | | (Grand total 35) |

COMMENTS ON ITEM 4
(75% or above)

| NO IDENTIFICATION | PUBLIC SCHOOL | CORRECTIONAL INSTITUTION |
|---|---|---|
| Motivation course content. | Cooperation - interaction. | Because of previous exposure & interest in module teaching. |
| Security - rotational problems - inconsisency in assigning students. | High student turn out - lack of time. | Student problems. |
| Being a correctional inst. myself, I don't feel I can honestly answer this question. | Motivation - the changing enrollment of the class. | Administration problems, security situation. |
| More realistic teaching situations greater use of existing methodology. | New students entering anytime Priority of security over school. | Placement. |
| Better methods of classification | Restrictions. | Security assignment of students, time out of classroom. |
| Enrollment - security. | Ideas of motivation similar to public but much more so. | Individual instruction? |
| Tools and equipment. | This sounds very much like ours. | Student assignment & interest. |
| Zookeeping - types of men, inst. problems. Student selection & motivation. | Student turnover and lack of equipment. (8 comments) | Disciplining. Better student placement. (8 comments) |
| (8 comments) | (50% or below) | |
| | Student motivations. | Type of manpower. |
| | | Levels of learning. |
| | (1 comment) | (2 comments) |
| | | (Grand total 27) |

COMMENTS ON ITEM 5
(75% or above)

| NO IDENTIFICATION | PUBLIC SCHOOL | CORRECTIONAL INSTITUTION |
|---|---|---|
| By exchanging course content and information. | Cooperation interaction. | Type of paperwork, etc. |
| The benefits of entry tests and posttests. | Similar problems. | Limits involved with different level students. |
| It enables me to receive a better scope of materials available and their uses. | Develop course outline interaction between group started. | A definite uniform curriculum is needed. |
| Hope so. | | Understanding performance objectives. |
| How to motivate the inmate more effectively. | | Because of type of student and other basic problems. |
| By more detailed information. | | By simplification. |
| Interchange of ideas. | | Mentality we are dealing with. |
| | | An understanding. |
| (7 comments) | (3 comments) | (8 comments) |
| | (50% or below) | |
| Interaction. | Limited time to develop meaningful measurement devices. | New material. |
| Interaction. | | Specific techniques. |
| | | Interaction. |
| | | We all attended the same programs and courses. |
| | | Modernization. |
| | | Positive approach. |
| | | New and more methods of obtaining materials. |
| (2 comments) | (1 comment) | (7 comments) |
| | | (Grand total 28) |

COMMENTS ON ITEM 6
(75% or above)

| NO IDENTIFICATION | PUBLIC SCHOOL | CORRECTIONAL INSTITUTION |
|---|---|---|
| Taking over class while gone during visitation. | Various areas were touched on-nothing specific. | Live work - money - supplies. |
| Visitation. | Bureaucracy and red tape hang ups. Administration reluctance to face problems. | Administration security. |
| Protocol | Security possibly. | Security. |
| Administrative duties. | Protocol for visits. | Visitations. |
| Administrative security problems. | Visitations. | Parts - correspondence - need to know. |
| Reading ability. We all have had similar problems. | Learning, teaching, motivation. | Considerable number visitation too numerous to mention. |
| | Poorly organized, more time should be spend planning | Lack of standardization of courses. |
| | Bureaucratic protocol. | Security. |
| (6 comments) | (8 comments) | (8 comments) |
| | (50% or below) | |
| Meeting, correspondance, chain of command, procedures. | Administration problems. | Visitations. |
| Classification of students. | | Security administration. |
| Security and motivation. | | Attendance, motivation, and student learning ability. |
| | | Learning motivation, etc. |
| | | Problems with below average students. |
| (3 comments) | (1 comment) | (5 comments) |
| | | (Grand total 31) |

COMMENTS ON ITEM 7
YES

| NO IDENTIFICATION | PUBLIC SCHOOL | CORRECTIONAL INSTITUTION |
|---|---|---|
| Developed curriculum in medical electronics using behavioral objectives. | In process of establishing modules for my program. | Private business. |
| My own course of study was written that way. | Workshop inservice. | College curriculum. |
| Apprentice programs | Other workshops. | Oswego curriculum development. |
| | Workshops and modules on performance objectives. | I was on their advisory group. |
| | Developed. | BOCES occupational analysis VED? |
| | Inservice workshops. | UT courses. |
| | At own facility. | School. |
| | | In teaching with Ford Motor Co. |
| | | Divisions job sequences. |
| (3 comments) | (7 comments) | (9 comments) |

NO

| | | |
|---|---|---|
| I have heard of them. | | New in education field. |
| (1 comment) | (0 comments) | (1 comment) |
| | | (Grand total 21) |

COMMENTS ON ITEM 8
(75% or above)

| NO IDENTIFICATION | PUBLIC SCHOOL | CORRECTIONAL INSTITUTION |
|---|---|---|
| Helped me understand the concept a little better. | Advantage of module for random enrollment and specific testing. | Clarity terms and better understanding of a module. |
| A better means of measuring your accomplishments. | Additional resources.. | By actual participation. |
| By mutual cooperation. | | Confirmed my belief of the need of this system because of the type and turnover of students under open enrollment. |
| By showing me the value and proper application. | | |
| New ideas. | | Better outlines. |
| Hand out materials. Ideas from others on what and how. | | Have better understanding of how it's prepared. |
| Give me basic concept (esp. Jun B) | | |
| I now have an understanding of module construction. | | |
| (8 comments) | (2 comments) | (5 comments) |
| | (50% or below) | |
| We lack a valid skill list for radio-TV technology. | Pretest and entry. | More understanding of how a modular is set up. |
| Better understand of what was wanted. | Basic understanding of format. | Outline of modules and definition of modules. |
| Reinforced. | Module development explained. | Basic outline. |
| How to present new procedures in handling problem cases. | Define modular approach. | The vehicle to establish same. |
| Basic definition outline. | Brought out ideas not thought pertinent before. | Definition, design, concepts. |
| | Some insight on top of present knowledge. | Because of the turnover in the students. |
| | | Knew nothing about modules before. |
| | | To simplify our beginners understanding. |
| | | By teaching students at many different levels. |
| (5 comments) | (6 comments) | (9 comments) |



(Grand total 35)

## COMMENTS ON THE BACK OF THE EVALUATION PAGE

### NO IDENTIFICATION

This has been a helpful and meaningful experience. Will have a great effect in teaching in the future. Interagency cooperation will be fruitful for all concerned.

In general, the program provided a valuable exchange of information between intragroup members. I don't believe we completed the objectives as outlined in the memo provided the participants.

No enough time for informal discussion. We're just geting to know each other and are comfortable and it's over. More time should have been spent exchanging successful teaching methods -- programs -- audio-visual, etc.

We should have more of these informative sessions so that we can exchange ideas, problems, equipment, training methods, etc.

If prior to coming, the instructors were asked to get down on paper, ideas or modules now in use. Some of the modules developed by one group could be of use by other trades. (e.g., a measurement module developed by Plumbing could be used by auto body, etc. These modules could be used picked over for ideas and directions.) One of the pre or post test could be used by other trades.

The interaction emphasis was of definite help to all involved. Mailing lists were obtained to exchange information.

Good meeting. Suggest that coffee be available. Also directory of participants could easily be ready by end of session. (especially if information form were filled out at region).

I hope this will not be the end of this cooperative effort. Please follow up on a good thing that we have started.

COMMENTS ON THE BACK OF THE EVALUATION FORM

PUBLIC SCHOOL

About the only comment I could possibly make is now that a communicative stream has started, keep it moving. If another institute like this should be in the plans in the near future, I would recommend that participating co-op teachers be advised so that we have an opportunity to better prepare. P.S. I enjoyed it and it was productive.

In my opinion, another meeting or workshop is of the utmost importance. Perhaps, of longer duration. A more specific outline of objectives (to be given by the leaders) has to be given. Vague approaches only lead to useless expense of time. We all got a feeling of mutual understanding of each others problems. Perhaps, as much was accomplished "after hours" as during hours.

We intend to keep mailing to each other literature. Plus visit each others shops.

I feel that a working relation between the D.C.S and myself will continue and hopefully inspire the educational systems both in the D.C.S. and the public school systems.

If one of the objectives was to write modules in performance objectives then the workshop should have had someone with experience in writing these occupational education (psychomotor domain). This would have trained all participants in writing modules not confusion.

This workshop should have followup meetings and extended cooperation between corr-and ITT persons. Specific problems which should be dealt with in both areas: student entry level and screening.

More time should be given to ideas of teachers. Most of the available study time was used to develop written work to be handed out. In some cases, this did not product the best results possible. Too much time available used on introductory remarks and presentations not exactly meaningful to situation. Hard to use or adapt academic situation to vocational.

COMMENTS ON THE BACK OF THE EVALUATION PAGE

CORRECTIONAL INSTITUTION

The meeting was very constructive, Created. A feeling of resolving mutual problems in a well conducted manner. Thank you.

I would like to see more meetings of the type --longer periods.

An excellent example of professionals comparing cooperating and developing a usable product. More followup is needed and visitation seems an excellent method for professional interaction. More of this interaction between education are needed.

Encountered in this seminar, was a feeling of cooperation, need for more exposure to different approaches in presenting materials and general exchange of resources a very meaningful experience.

Because of the number of students added at any time during the school calendar I have been using a form of this type of program. I have used a type of test that tells me something about this general knowledge.

I think the meeting was very beneficial and future meetings of this type should be considered.

I feel the need for a committee to develop standard module to be adopted by all faculty.

Development of the module concept should be presented more fully be presenting actual module teaching demonstration in a how to situation. Possibly a course in module teaching concept.

It is a great advantage for the group to exchange ideas and better ways to teach by other skilled tradesman ideas. We should meet at least every six months to better serve our curriculum outlines.

# PART III

## HOW TO APPLY THIS EVALUATION APPROACH TO DIFFERENT SITUATIONS

Part I has stressed the difference between an evaluation summary and a complete evaluation report.

Part II has shown how to develop evaluation summaries and complete evaluation reports.

Part III shows how to apply this evaluation approach to a wide variety of different situations.

## SITUATION A

### CHARACTERISTICS OF SITUATION A

A large group meeting is conducted.

Each participant is asked to fill out an evaluation form.

The participants are grouped into a minimum of two subgroups.

Tabulation is made by either an external or by the institute director.

An example of Situation A is found in Part I and Part II of this document.

TYPICAL VARIATIONS:

The external evaluator tabulates the data.
The institute director tabulates the data.
Both the institute director and the external evaluator tabulates the same data and compare conclusions.
Either the external evaluator or the institute director take a separate sampling.
When the group is large, only a 6 percentage of each subgroup fills out an evaluation form.

## SITUATION B

### CHARACTERISTICS OF SITUATION A

The same as Situation A except that the institute director also fills out an evaluation form.

The external evaluator receives the data from the participant evaluators.

The external evaluator receives the data from the institute director.

Before looking at the evaluation form filled out by the institute director, the external evaluator goes through all the processes spelled out in Part I and Part II.

With this done, the external evaluator compares the responses of the group, subgroups, and institute director.

Agreements are pinpointed. Disagreements are pinpointed and discussed for resolution.

This type of evaluation helps the institute director realize how well the group consensus has been ascertained through informal feedback.

TYPICAL VARIATIONS:

The institute director and the institute staff fill out the evaluation forms.

When the number of participants is small, subgroups are avoided and the institute director is compared directly to the group total.

A particular power of variation B is the fact that: Sometimes, the institute director has an awareness of the generalized group reaction without being able to break this reaction down into significant subgroups. Sometimes, the institute director is aware of the reaction of only one of the subgroups and not in contact with reactions of other subgroups or of the total group.

# PERSPECTIVES
# FOR EVALUATING THE INSTITUTES
# BETWEEN CORRECTIONAL TEACHERS AND VOCATIONAL TEACHERS

How many readers of this page can tell exactly what is meant by a

> Flexible device
> for consolidation of quantified but amorphous forces
> into a linear form
> and into vectors selected from
> a poly-directional array?

The way the above question is put complicates any attempt to arrive at an answer. This definition of a TOW ROPE is indeed very technical, very accurate, and easily quantified. Unfortunately, it is not the type of a definition that helps correctional teachers and occupational teachers pull together.

In setting up this evaluation design, consideration has been given to a number of good statistical techniques, such as co-variance, multi-regression, and bifurcation. The final choice of evaluation design has been based upon the desire to create a meaningful evaluation.

## A MEANINGFUL EVALUATION

A meaningful evaluation assumes that both correctional teachers and occupational teachers can work together and will continue to have joint institutes in the future. These joint institutes will undoubtedly follow the patterns and presidence set by the first institute.

It is important that the evaluation design for the first institute prepares for future institutes.

In other words, this evaluation is looking for both good and bad results of the initial collaboration effort. The institute planners will improve the bad results. The instituteplanners will reinforce and utilize the good results.

This is why the following evaluation form stresses as the number one priority the determination of WHAT WENT RIGHT and WHAT WENT WRONG with the initial institute.